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REPORT

CD NO.

50X1-HUM

COUNTRY	USSR	DATE OF INFORMATION	1950
SUBJECT	Economic; Technological -- Construction machinery	DATE DIST.	4 Dec 1950
HOW PUBLISHED	Daily newspapers; weekly, monthly periodicals	NO. OF PAGES	3
WHERE PUBLISHED	USSR	SUPPLEMENT TO REPORT NO.	
DATE PUBLISHED	Feb - 24 Sep 1950		
LANGUAGE	Russian		

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SUBWAY, CANAL MAKE DEMANDS ON CONSTRUCTION MACHINERY;
MINSK STORES SHORT OF CARPENTERS' TOOLS

SUBWAY BUILDERS USE PNEUMATIC TOOLS -- Moscow, Mekhanizatsiya Trudoyemkikh i Tyazhelykh Rabot, May 50

Experimental models of the PSG-1 and PSG-2 nut-tightening tools designed by Engineer A. N. Grushnikov were recently put into production at the Pnevmatika Plant, after being tested in the Moscow subway tunnels.

The PSG-1, operating at a pressure of 4 atmospheres, exerts a turning moment of 7,000 kilogram-centimeters. The chuck makes 22 revolutions per minute. The machine weighs 12 kilograms, but could be reduced to 10.5 kilograms if the housing were made of light alloys.

The ratchet which turns the chuck is moved by an arm attached to a cylinder within the housing; the cylinder is forced by the air pressure back and forth over a fixed piston. At 4 atmospheres' pressure the cylinder travels from one side to the other 460 times per minute, expending 1.2 cubic meters of air during that time. It takes the machine 30 seconds to tighten the nut for an M30 bolt.

The PSG-2 has a different air distributor, but in other respects is similar to the PSG-1. The PSG-2 develops a turning moment of 8,000 kilogram-centimeters at 4 atmospheres. The chuck rotates at 8 revolutions per minute, with air expenditure amounting to 1.3 cubic meters per minute. It will tighten an M42 nut in 1.5 minutes. The machine weighs 14.5 kilograms.

Engineers N. G. Orlov and V. V. Dudin, working in collaboration with designers of Machinery Plant No 5 of the Metrostroy Trust, designed several percussion-type nut tighteners. The latest of these has a rotary pneumatic motor, making about 2,500 revolutions per minute at 4 atmospheres' pressure. This tool, weighing 10 kilograms, can develop 2 horsepower. Another machine built at Plant No 5 employs the vibration principle in bolt tightening. It was designed by Engineer S. V. Lebedev.

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The Sverdlovsk Pnevmostroyinstrument Plant of the Ministry of Construction- and Road-Machine Building is putting out a percussion-type pneumatic bolt tightener for M30 bolts. It is not suitable for subway-tunnel work however, because of its weight (14 kilograms) and size.

Greater production of nut tighteners, permitting their mass application in construction of the subway tunnels, is an important goal to strive for, as -- the reduction of the weight of the tools to 6-7 kilograms.

NEW MACHINES CUT BUILDING COSTS -- Riga, Sovetskaya Latviya, 16 Aug 50

The Leningrad Promet Plant has sent to the Donbass a consignment of machines which turn out light sheets of gypsum for building purposes. These machines cut building costs as well as labor.

A new machine produced by the plant makes hollow gypsum blocks. These inexpensive but high-quality blocks will be used in the construction of high buildings in Moscow, and for other construction projects.

PNEUMATIC TOOL GOES INTO PRODUCTION -- Moscow, Mekhanizatsiya Stroitel'stva, Feb 50

The PM-2 pneumatic tool, designed for drilling, reaming, and thread-cutting of pipes, has been put into series production at one of the plants of the Lenpromenergomontazh Trust.

The machine comes in two models, one weighing 36 kilograms, with an aluminum casing; the other weighs 52 kilograms and has an iron casing.

COMPLAINS OF TOOL SHORTAGE -- Minsk, Sovetskaya Belorussiya, 1 Aug 50

A carpenter writes that tools of his trade are not to be found in the Minsk stores. Among those which cannot be obtained are such basic items as hammers, planes, and levels.

TAKE STEPS TO IMPROVE EXCAVATOR -- Tashkent, Pravda Vostoka, 9 Aug 50

The Tashkent Excavator Plant is working on improvements of their E-502 excavator.

A 4-meter additional cage section for the boom has been approved for series production, and the design for a new 0.75-cubic-meter bucket has been approved. Bucket teeth having tips of wear-resistant steel are being designed, and plans call for the construction of a special drill jig, to aid in equipping buckets with interchangeable teeth.

The projected alterations in the excavator should increase its cutting efficiency.

TURN OUT EXTRA EQUIPMENT FOR BUILDERS -- Moskovskaya Pravda, 16 Aug 50

The Moscow Plant imeni Kalinin of the Ministry of Construction- and Road-Machine Building has produced 59 machines and 27 compressors in excess of the 7-month plan. This equipment will be used in the construction of high buildings.

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NEW PLATFORM GIVES CRANES GREATER MANEUVERABILITY -- Leningradskaya Pravda,
20 Aug 50

As a rule, tower cranes of the type used in construction of high buildings move along the construction face on rails. When the direction of travel must be turned at right angles to the track, the crane must be taken down and reassembled on the new track.

To cut the time wasted in this operation, the Lenmekhmontazh Trust has built and tested a new universal platform, which is capable of mounting a 45-ton crane. Riding on this platform, the direction of travel of the crane may be changed in one hour and 20 minutes. Formerly, such an operation took about one month.

BIG EXCAVATORS TO GO TO CANAL DIGGERS -- Moscow, Ogonyek, 24 Sep 50

The builders of the Turkmen Canal will be shipped machines in sufficient abundance to insure complete mechanization of the gigantic undertaking. Among these will be: heavy excavators with bucket capacities of 3-14 cubic meters, and productivity up to 1,800,000 cubic meters per year; mud pumps, loading machines, dump trucks, tractors, bulldozers, and scrapers. There will also be portable concrete plants, which can be moved from one area to another, according to the needs for concrete.

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